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ABSTRACT

A programatic model consisting of four dimensions for identifying components to be evaluated in various instructional programs is described. In the first dimension, major categories of any instructional program are identified: (1) appropriateness; (2) history; (3) objectives; (4) methodology; (5) evaluation procedures and (6) effectiveness. Components (1)-(3) are categorized as input, (4) and (5) as operations, and (6) as output. The second dimension concerns the populations involved in the evaluation: students, teachers, administrators, and the community. The third dimension describes three operations to be carried out during the evaluation study: definition, analysis, and suggestions. The final dimension suggests two approaches to the collection of information: research and description. Definitions of the evaluation components are elaborated upon. (Author/MH)

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EVALUATION CHECKLIST FOR AN INSTRUCTIONAL PROGRAM: TASK DEFINITION*

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As a response for the growing desire to improve academic programs, increasingly numerous evaluation methods and models are being proposed, tried, modified and refined, with the state of the art being still in an overall embryonic stage. A review of the pertinent literature reveals various and diversified attempts to develop models that would facilitate the evaluator's task. The most notable works in the field are briefly presented below, many of which having been --and are still being-- further developed and elaborated upon.

One of the older attempts to build a prototype for evaluation studies was provided by Tyler (1942), and was based on a comparison performance with stated objectives, using pre- and posttest measures of achievement. Looking at the problem from another perspective, Stake (1967) later suggested an approach relying relatively heavily on informal or subjective information obtained from a variety of audiences, with frequent use of questionnaires and opinion polls. Noting that the evaluation of the stated objectives could sometimes be misleading because of their inappropriateness, Scriven (1967) suggested that evaluators carry out their tasks with no regard for the stated objectives.

What is perhaps the most well known model today has been proposed by Stufflebeam (1968). Based on four aspects of the program, context,

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input, process, and product (which led to the acronym "CIPP"), information is obtained to formulate recommendations for decision-making purposes. Another approach, proposed by Provus (1969) is based on the comparison of performances against standards: a three-dimensional model made up of instructional, institutional, and behavioral components is used as the basis for information gathering. A more detailed comparative treatment of these and other evaluation theories has been made by Worthen and Sanders (1973), and by Alkin and Fitz-Gibbon (1975).

In this article, a model for identifying the components to be evaluated in an instructional program is advanced. Although philosophical similarities with a number of proposed approaches can be detected, some of which being pointed out in this article, the present model claims to be more pragmatic, and hopes to be as general and as inclusive as possible.

THE MODEL

An instructional program can be conceived as being any educational activity designed to produce specified changes in the behaviors of the individuals exposed to it. Although in such context these individuals are thought of as being the students, yet other categories of persons that directly affect the instructional outcome are the instructors, the decision-makers or administrators, and, less directly but not less importantly, the community. Thus, a complete evaluation of an instructional program necessitates the consideration of these four human components, but only inasfar as they relate to the educational enterprise under scrutiny. Along another dimension, six major categories can be identified in any instructional program for evaluation purposes. These are appropriateness, history, objectives, methodology, evaluation procedures, and effectiveness, the first three composing the input, the following two the operations, and the last one the output. By virtue

of their nature which will be described in greater detail later on in the article, these components require an evaluation activity that moves essentially along two directions: the research method, based on the description of a certain phenomenon by means of data conllected under controlled conditions, and the descriptive method, consisting of the description of a certain phenomenon on the basis of theoretical considerations alone. This approach reminds us of Stake's which gives equal importance to what he calls the descriptive and the judgmental data. On the other hand, because the model proposed here includes the evaluation of the stated objectives, the divergence between this model and Scriven's Goal-Free model can be readily apparent.

The six categories composing the present model can be subjected to three operations. The first one, definitions, consists of identifying what the components to be evaluated are made up of and determining their general characteristics. This step dictates to a great extent the task to be performed in the remainder of the evaluation process. The second operation, analysis, consists of collecting evidence regarding how the variable is in the specific context within which the evaluation process is carried out. This part usually constitutes the core of the research activities. The third operation, suggestions, consists of the interpretation process and allows the actual process of "evaluation", that is the formulation of value judgments, to take place.

Three of the four aspects identified in the foregoing presentation are schematically illustrated in Figure 1, whereas the fourth aspect, namely the evaluative approach (research/descriptive), though to be borne in mind, has been deleted for ease of presentation. The resulting 144 cells (72 shown in the cube for each of the two approaches)

Insert Figure 1 About Here

should be viewed as an exhaustive checklist to be used by the investigator during the evaluation process.

Once the definitions are clearly laid out, the remainder of the evaluation activities boils down to a process of discrepancy identification in line with that advocated by Provus (1971). This is because, according to this model, the evaluation process is based on the comparison of how the variable has been found to be with how it should actually be. The various tasks involved in the three operations to be carried out during the evaluation process can probably be more clearly delineated by comparing this division with the well-known Scientific Method that is so dear to educators. The first of the operations proposed here, definitions, is identical with the first step in the Scientific Method, namely the definition and identification of the problem. The second operation, analysis, is equivalent to the three subsequent steps of the Scientific Method, namely the formulation of hypotheses, the collection and the analysis of data. Finally, the third and last operation, suggestions, is analogous to the fifth and last step of the Scientific Method, namely the derivation of conclusions and recommendations.

On the other hand, the identification and arrangement of the components to be evaluated in this article is analogous to some extent to Stufflebeams' CIPP. So, the first two components, appropriateness and history, make up the context, and the following three, objectives, methodology, and evaluation methods, can be traced back to a combination of of Stufflebeams' Input and Process. Finally, the last component, effectiveness, is identical to the Product. It should be noted, however, that less emphasis on decision making is given in this model than in CIPP, a substantial portion of the pie being devoted here to the detection of discrepancies.

The remainder of this article will be devoted to the discussion of only one aspect of the evaluation process, namely the definitions of the components to be evaluated in an instructional program. Two dimensions in the definition process of our model will be elaborated upon: the participant dimension (denoted by the dotted surface in the cube), and the component dimension (denoted by the striped surface in the cube). The definition aspect is given special emphasis here because of its generalizability as well as its importance, the same way the first step in the Scientific Method is estimated by many accounts as being the most important. It should be noted that, in the course of this discussion, some components classified under different categories will appear to be partly interwoven. This connection will be pointed out whenever it occurs and is generally not strong enough to warrant grouping these components under the same category.

Participant Definition

By participant definition is meant here the delineation of the various aspects of the four categories of participants that are to be considered in the evaluation process. It should be clearly noted that this model does not attempt to evaluate the participants themselves, but rather to evaluate the program in light of the characteristics of the participants. Some of the issues of concern here are: who benefits, who determines the policy, and who should be held accountable.

Student characteristics : age, aptitude, interests, aspirations, needs, socio-economic background,...

Instructor characteristics: formal education, capability, interests, experience, special training such as that at the preservice or inservice stages,...

Administrator characteristics: capabilities, experience (including support staff as secretaries and clerks), policy to be pursued, attitude toward the instructors (freedom of expression, security,

opportunity for research,...),...

Community characteristics: needs, public opinion and group pressure on education, relationship with the schools, and other political, religious, sociological, and economic considerations.

Component Definition

The following is a breakdown of the six evaluation categories proposed in this model.

1. Appropriateness

This aspect of the evaluation process is presumably chronologically the first, and deals mainly with what the program has to offer in relation to the educational setting. The answers to preliminary questions such as the following are then sought: Is the program appropriate for the particular environment in which it is implemented? Is it adequate in relation to the qualifications of the participants? Of particular importance are the following aspects:

A. Level of difficulty. A highly difficult program would bring about discouragement of the students and an increase in their anxiety level, whereas a program that is too easy may be of little interest and could lead to boredom and loss of interest.

B. Relevance. By relevance of a program is meant is suitableness for the particular environment in which it is being implemented, with special emphasis on the school and the community. This aspect is intimately related to the dimension of participant characteristics, and to part C mentioned below. It is suggested, however, that the analysis be carried out in this section mainly on matters dealing with the context of the instructional material and the suitableness of the examples, illustrations and applications presented.

C. Practicality. This analysis deals with three main aspects : the financial considerations attached to the implementation of the program, the availability of instructional material, and the length of the program in relation to the alloted time.

2. History

When sufficient evidence as to the appropriateness of the program has been collected, the activity to follow consists of probing into such matters as the presence of any evidence of its field testing and success. In this section, we would also investigate considerations related to the length of time in which the program was implemented: if for a long time, this could indicate a successful program, but may also suggest a need for revision; and if for a short time, this could indicate defects in the program and suggest a more careful scrutiny of its various aspects. In light of this information, an assessment of the length of the period of time during which the program is planned to be implemented could be made. So, a program with a long history of success could be recommended for a longer implementation period than a relatively novel one.

3. Objectives

Although the objectives of an instructional program could be included under the "Methodology" component of the present scheme, which is discussed below, there exists some advantages in dealing with them as a separate entity by virtue of their intrinsic importance. The analysis of instructional objectives can be done in many ways, and the approach presented in this article consists of breaking down this analysis into the following six aspects:

A. Clarity. The clarity of an objective deals with the style with which it is expressed. There is good reason to believe that objectives stated in terms of behaviors or performances to be attained by the students are as clear as can be stated. This component of the evaluation process would

also investigate whether the objectives of the program are being actually disseminated or not.

B. Completeness. This section deals with whether the stated objectives cover all the subject-matter, and conjuctionally, whether they are sufficient to attain the program's desired goals.

C. Importance. The course objectives should have a constituing importance, to be evaluated within the framework of the students' needs, characteristics and interests, as well as in relation to the local (social) standards.

D. Ordering. The ordering in which the objectives are planned to be attained is another important consideration. The answers to the following questions are some examples of what would be sought here: Is the ordering of the objectives logical or hierarchical? Does it place simpler objectives before complex ones? Is it geared at linking the various subject-matters with each other or is it aimed at differentiating between them?

E. Attainability. The foregoing aspects of the objectives should be coupled with the reasonableness and realism of their attainment. This aspect would be estimated on the basis of such criteria as student and teacher characteristics as well as in relation to the local standards.

F. Intended outcome. The intended outcome of an objective is the outcome that is expected to result from the instruction. Examples of favorable though somewhat vague outcomes of instructional objectives are the development of critical thinking, the development of scientific literacy, gearing students toward higher education, and making good citizens. These outcomes could then be compared with the actual outcomes that would be investigated under the "Effectiveness" category of this model, to be discussed later on in this article.

4. Methodology

In addition to the instructional programs which have been dealt with separately, the following considerations are of concern in the evaluation of the methodological aspects of an instructional program:

A. Learning material. Analysis of the learning material in terms of factors previously under appropriateness and objectives is of concern here. Learning material includes textbooks, audio-visual aids, teacher manuals, and other aids such as background reading material and suggested teaching strategies. Also under scrutiny here is whether such material is available or not, the attractiveness of its presentation, the advantages resulting from its use, and its compatibility with the course objectives.

B. Sequencing. This activity consists of analyzing the sequence of the material the same way the ordering of the objectives is to be analyzed, and investigating the relationship between the two. The sequence should also be based on a desirable pedagogical framework (e.g. Piaget's for an elementary-school program).

C. Teacher's role. The major responsibility of the teachers being to teach, it is not unusual to conceive the implementation of the methodology as relying mostly upon them. In addition to providing the teachers with manuals and other aids (discussed under A above), desirable trends associated with their role should be looked for. Examples of such trends are reasonable freedom in selecting the instructional material, encouragement to play basically a guiding role, and opportunity to interact with the students in the course of instruction.

D. Students' role. The methodology of a program can foster desirable habits in the students, such as bearing them toward learning how to learn, giving them enough opportunity for practical work, and allowing them to work as individually as possible.

It should be clarified here that the definitions of sections C and D above should be carried out each in light of the characteristics of each of the four categories of participants, the same way any other section is. So for example the teacher's role suggested by the methodology and a very integral part of it should be defined in terms of the actual characteristics of the students, the teachers, the administrators, and the community.

5. Evaluation Procedures

An important component of any evaluation activity that is often neglected in an instructional program is the evaluation of the procedures used to

assess student performance. Because of its powerful impact on all the participants in the program, such information should be obtained only after careful planning. It is generally useful for an instructional program to clearly state its recommended evaluation procedures to the teacher, with suggestions and interpretation guidelines. Whether the evaluation activity is suggested to the teachers or prepared by them, it should be administered at regular or logical intervals and should extend over the whole instructional period. The evaluation instruments should also be checked for their objectivity, adequate difficulty, practicality, and adequate representation of the course objectives. The fairness of the assessment of student performance should also be investigated. Also, the availability of evidence related to teacher evaluation, program evaluation, and the evaluation of the program impact on the community are all desirable features.

6. Effectiveness

By effectiveness is meant here the extent to which an instructional program has succeeded in producing changes. Thus, the focus in this section is on discrepancy identification between the output and the input. The importance of this information is demonstrated by the frequent observation that the evaluation of an instructional program relies exclusively on the evaluation of its effectiveness. The ultimate concern is obviously the extent of benefit made by the students, including their academic achievement as well as any observable change in attitudes and behavior, notwithstanding the impact on the other community members. Although it can be rightly argued that the evaluation of the impact of a certain program on society in general is an impractical endeavor to undertake for obvious reasons, the effects on a more definite category of members of the society such as parents can be more readily analyzed. Taking teachers as an example of a specific category, one would be concerned about whether the curriculum has rendered them more enthusiastic about teaching, or has forced them to increase their work load, etc...

A very important component of the program effectiveness is the actual on-the-job performance of those students who graduated from the program. Along with such analysis, a study of the actual outcomes that have resulted from the implementation of the objectives should be carried out and re-currently compared and contrasted with the stated ones discussed under the "Objectives" category discussed earlier, and with those previously attained by past field-testing discussed under the "History" category above.

Finally, the side effects of the instructional program should also be looked for and analyzed under this section. Some positive examples of these effects could be an improvement in library facilities or in teacher/student ratio.

A summary of the definition of the components to be evaluated in an instructional program discussed in this section can be conveniently

Insert Figure 2 About Here

represented by the hexagon shown in Figure 2.

Summary

The intent of the model presented in this article is to provide the skeleton of an evaluation study for a wide variety of instructional programs, from generic to specific, literary to scientific, and totally theoretical to totally practical. There may be a need, however, to "tailor" the model to fit the desired evaluative activity more accurately. The definition of the tasks to be performed has been done here with special emphasis on two dimensions in the evaluation process, namely the definition of the participant characteristics in relation to which the study should be focussed, and the definition of the program components to be evaluated.

References

Alkin, M., & Fitz-Gibbon, C. Methods and Theories of Evaluating Programs, Journal of Research and Development in Education, Vol. 8, No. 3, 2-15, 1975.

Provus, M. Evaluation of Ongoing Programs in the Public School Systems, In Tyler, R. (Ed.), Educational Evaluation: New Roles, New Means, Part II, Chicago: University of Chicago Press, 1969.

Provus, M. Discrepancy Evaluation, Berkeley: McCutchan Publishing Co., 1971.

Scriven, M. The Methodology of Evaluation. In Stake, R. (Ed.), Perspectives of Curriculum Evaluation, AERA Monograph Series on Curriculum Evaluation, No. 1, Chicago: Rand McNally, 39-83, 1967.

Stake, R. The Countenance of Educational Evaluation, Teachers College Record, Vol. 68, 523-540, 1967.

Stufflebeam, D. Evaluation as Enlightenment for Decision-Making, Address at Working Conference on Assessment Theory, the Association for Supervision and Curriculum Development, Sarasota, Florida, January 1968.

Tyler, R. General Statement on Evaluation, Journal of Educational Research, Vol. 35, 492-501, 1942.

Worthen, B. & Sanders, J. Educational Evaluation in Theory and Practice, Worthington: Charles A. Jones, 1973.

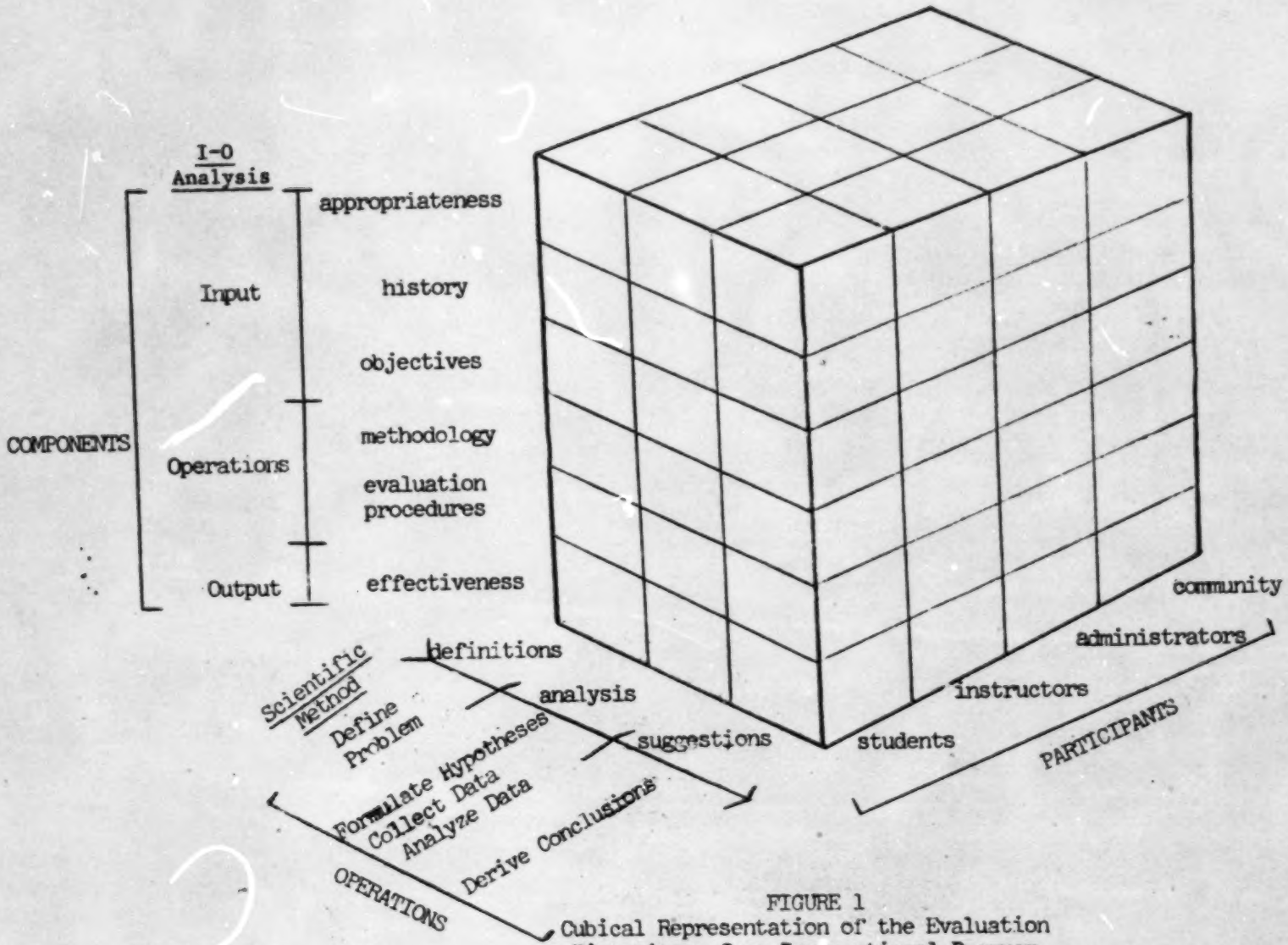

FIGURE 1
Cubical Representation of the Evaluation Dimensions of an Instructional Program

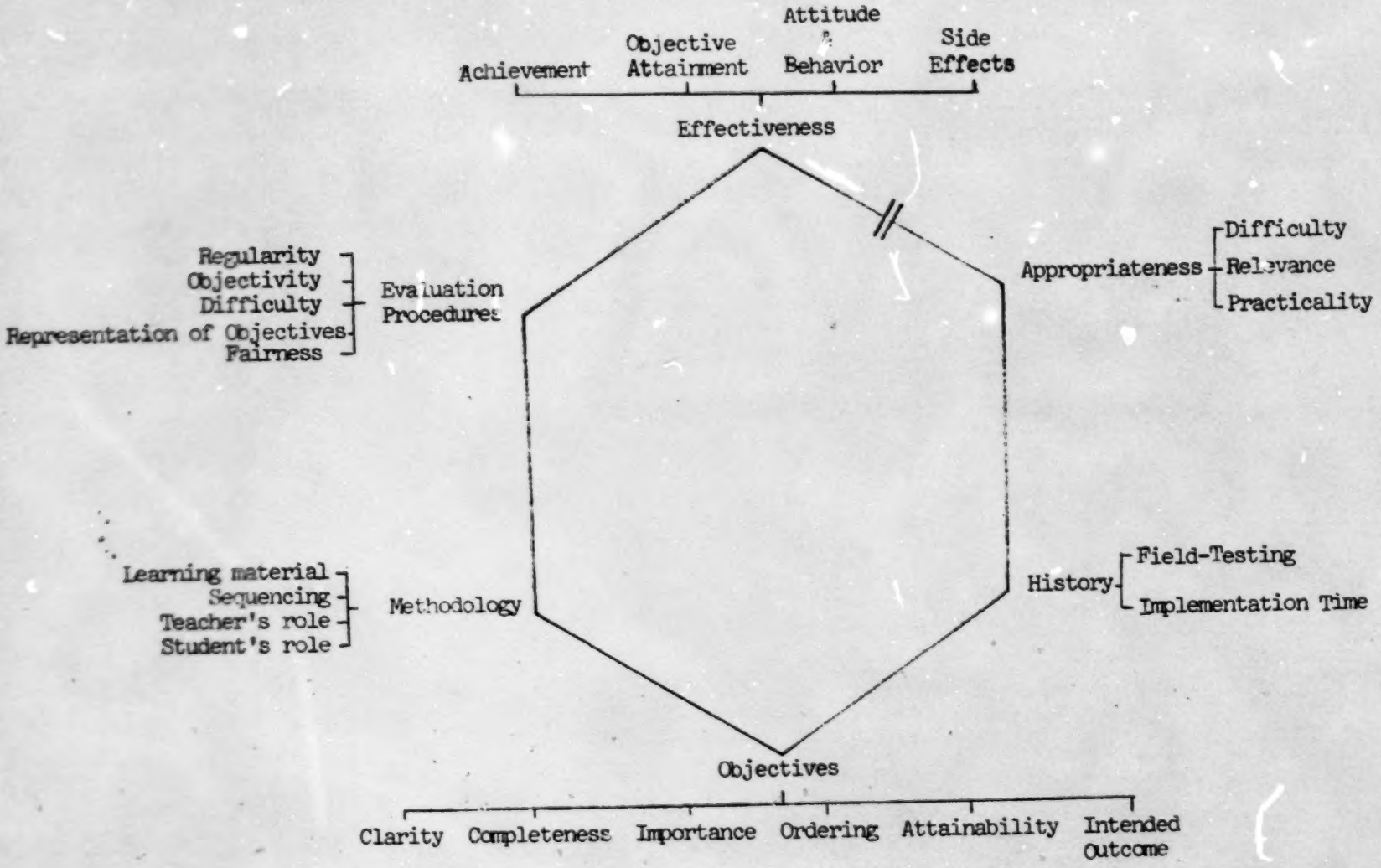

FIGURE 2
Hexagonal Representation of the Component Definition of an Instructional Program